

ABSTRACT OF THE DISCLOSURE

A technique for analyzing an anomalous condition in a process for producing a product is described, where the process includes plural subprocesses for performing operations on the product. The technique includes: (a) for each of the subprocesses, providing sensor output from at least one sensor used to measure information pertaining to the status of the respective subprocess; (b) for each of the subprocesses, extracting at least one representative value that is characteristic of a pattern expressed in the output, thus generating a plurality of representative values for the process as a whole; (c) retrieving data from a knowledge base, the data including a plurality of representative values, and also including information which maps the representative values to associated anomalous conditions; (d) analyzing the plurality of representative values output from the parameter extracting step with respect to the data stored in the knowledge base, and for generating a diagnostic result which diagnoses an anomalous condition in the process, and also identifies at least one of the subprocesses which has caused the anomalous condition; and (e) using the diagnostic result to affect corrective action to the at least one of the subprocesses which has caused the anomalous condition by adjusting at least one actuator that controls the at least one subprocess.